



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,834	01/29/2004	Yoshiki Nobuto	248226US0	2367

22850 7590 04/13/2009
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

STEELE, JENNIFER A

ART UNIT	PAPER NUMBER
----------	--------------

1794

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

04/13/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/765,834	Applicant(s) NOBUTO ET AL.	
	Examiner JENNIFER STEELE	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/13/2009 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claim 1-6 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Any negative limitation or exclusionary proviso must have basis in the original disclosure. The mere absence of a positive recitation is not basis for an exclusion. Any claim containing a negative limitation which does not have basis in the original disclosure should be rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. See *Ex parte Grasselli*, 231 USPQ 393 (Bd. App. 1983), *aff'd mem.*, 783 F.2d453 (Fed. Cir. 1984). The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that

Art Unit: 1794

the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim recites the limitation "wherein microfine fiber bundle (A) does not contain microfine fibers made of non-elastic polymers and that microfine fiber bundle (B) does not contain microfine fibers which have a single fiber fineness of 0.5 dtex or less and which are made of an elastic polymer having a JIS A hardness of 90-97." The specification does not recite this limitation. The specification teaches:

"the microfine fiber made of an elastic polymer (elastic microfine fiber) and the microfine fiber made of a non-elastic polymer (non-elastic microfine fiber) used in the present invention are each produced by removing an island component by dissolution or decomposition from a microfine fiber-forming fibers which is made of at least two different polymers...an elastic polymer is used in the microfine fiber-forming fiber (A') for forming the microfine fiber bundle (A), and a non-elastic polymer in the microfine fiber-forming fiber (B') for forming the microfine fiber bundle (B)" (specification pg 6, lines 3-13)

Where the microfine fiber-forming fiber (A') is described to be elastic and used to form the fiber bundle (A) and the microfine fiber-forming fiber (B') is non-elastic and used to form fiber bundle (B). However the specification continues to describe a process where the microfine fiber-forming fibers (A') and (B') are mixed or blended.

"both sea components are removed after mixing the microfine fiber-forming fibers (A') and (B')." (specification pg 11, lines 7-8).

"After blending, the microfine fiber-forming fibers (A') and (B") are made into microfine fibers to form the microfine fiber bundles (A) and (B), respectively. The blending ratio, (A')/(B'), should be selected so that a blending ratio, microfine fiber bundle (A)/microfine fiber bundle (B) is 30/70 to 70/30 by mass when the microfine fiber-forming fibers (A') and (B') are made into the microfine fibers" (specification pg 12-13, lines 26-29, 1-2)

"The method of blending microfine fiber bundles (A) and (B) may include a method in which the microfine fiber-forming fibers (A') and (B') in a predetermined ratio are gathered into a bunch which is then drawn, crimped and cut to obtain a mixed raw stock, and a method in which microfine fiber-forming fibers (A') and (B') are separately drawn, crimped and cut to produced respective raw stocks which are then blended in a blender" (specification pg. 13, lines 9-15).

The description in the specification does not support the limitation that the microfine fiber bundles of (A) and (B) are made of exclusively (A') where (A') is elastic and (B')

Art Unit: 1794

where (B') is non-elastic. The description describes a process where the microfine fiber-forming fibers are blended. The specification does not teach or disclose specifically that non-elastic polymers are not included in (A) and that microfine fibers which have a single fiber fineness of 0.5 dtex or less and which are made of elastic polymer are not in (B). While it is clear that microfine fiber-forming fiber (A') is an elastic polymer and microfine fiber-forming fiber (B') is a non-elastic polymer. The specification is not clear that (A') and (B') are not blended before becoming microfine fiber bundles (A) and (B). Therefore the current application can not be distinguished over the prior art. As the specification does not teach that (A') and (B') must not be blended in order to produce a fabric of unexpected results or improved characteristics, and the specification does not teach a specific embodiment as stated in claim 1, the claim limitation is considered subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim Rejections - 35 USC § 102(e)/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1794

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

2. Claim 1 and 6 rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over US Patent 6767853 to Nakayama et al. Nakayama teaches a fibrous substrate for artificial leather comprising microfine fiber bundles of (A) and (B) where (A) is elastic and (B) is non-elastic. The Nakayama reference teaches a fibrous substrate for artificial leather, comprising microfine fiber bundles composed of 3-50 microfine elastic fibers (A)(ABST). The elastic fibers (A), and bundles formed therefrom, are analogous to the claimed microfine bundles (A) comprising 10 to 100 microfine fibers. The claimed microfine fibers have a

Art Unit: 1794

fineness of 0.5 dtex or less; the analogous elastic fibers of the prior art have a fineness of 0.5 denier or less, thus meeting the claim limitations. The prior art further teaches microfine fiber bundles (B) comprising inelastic polymer fibers (ABST). The fiber bundles (B) are analogous to the claimed microfine fiber bundle (B). The fibers of the prior art bundles (B) have a fineness of 0.2 denier, which meets the limitation of claim 1, requiring fibers of the (B) bundle having a fineness of 0.5 dtex or less. Regarding the claimed blending ratio, the prior art teaches a blending ratio A/B of 10/90 to 60/40, thus overlapping the claimed blending ratio. Furthermore, the reference teaches (col. 9, lines 17+) impregnation with an elastomeric polymer, as required by claim 1.

Nakayama teaches that it is known in the art to employ fiber bundles of elastic polymers and fiber bundles of non-elastic polymers separately made into fiber bundles (col. 1, lines 48-67).

While Nakayama does not teach that microfine fibers (A) have a JIS A hardness between 90-97, this claim is not considered distinct because “when the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention the examiner has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980).”

Regarding claim 6, a grained leather-like material is disclosed (col. 10, lines 9, 43). As to claim 6, Nakayama teaches coating at least one surface of the substrate with a resin layer (claim 7). A resin layer is a film.

3. Claim 1 and 6 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nakayama (referred to as Takeshi et al in previous Office Action of 11/27/2007) EP 1067234 A.

The Nakayama reference teaches a fibrous substrate for artificial leather, comprising microfine fiber bundles of elastic fibers (A) and a microfine fiber bundles of nonelastic fibers (B). The weight ratio of (A) to (B) bundles is 10/90-60/40. The current application teaches a fibrous substrate with weight ratio of (A) and (B) bundles within this range of 30/70 and 70/30. The Nakayama reference teaches 3-50 numbers of microfine fibers (A) or fineness 0.5 denier or less which is considered the same as current application claim 1 of 10-100 microfine fibers of 0.5dtex. The Nakayama reference teaches 15 or more numbers of microfine fibers (B) while the current application does not specify the number of (B) microfine fibers.

Nakayama teaches that it is known in the art to employ fiber bundles of elastic polymers and fiber bundles of non-elastic polymers separately made into fiber bundles [0005].

While Nakayama does not teach that microfine fibers (A) have a JIS A hardness between 90-97, this claim is not considered distinct because “when the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention the examiner has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980).”

Claim 6 is rejected under 35 U.S.C. 102(b) as being anticipated by Nakayama EP 1067234 A. Nakayama, teaches impregnating the substrate with an elastic polymer as stated in Claim 1. Nakayama teaches coating at least one surface of the substrate with a resin layer (claim 7). A resin layer is a film.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claim 1 and 6 rejected under 35 U.S.C. 103(a) as being unpatentable over

Nakayama EP 1067234 A in view of Yamakawa et al (US 6,784,127). Claim 1

describes a leather-like sheet substrate comprising:

- a fiber entangled nonwoven fabric that comprises
- a microfine fiber bundle (A)
- and a microfine fiber bundle (B)

Art Unit: 1794

- in a blending ratio (A)/(B) of 30/70 to 70/30 by mass and a polymeric elastomer contained in the fiber-entangled nonwoven fabric,
- the microfine fiber bundle (A) comprising
 - 10-100 microfine fibers each of which has a single fiber fineness of 0.5 dtex or less
 - and which are made of an elastic polymer having a JIS A hardness of 90-97
- the microfine fiber bundle (B) comprising
 - a microfine fiber which has a single fiber fineness of 0.5 dtex or less
 - and which is made of non-elastic polymer
 - wherein microfine fiber bundle (A) does not contain microfine fiber made of non-elastic polymers and
 - that microfine fiber bundle (B) does not contain microfine fibers which have a single fiber fineness of 0.5 dtex or less and which are made of an elastic polymer having a JIS A hardness of 90 to 97.

The Nakayama reference teaches a fibrous substrate for artificial leather, comprising microfine fiber bundles of elastic fibers (A) and a microfine fiber bundles of nonelastic fibers (B).

The weight ratio of (A) to (B) bundles is 10/90-60/40. The current application teaches a fibrous substrate with weight ratio of (A) and (B) bundles within this range of 30/70 and 70/30.

The Nakayama reference teaches 3-50 numbers of microfine fibers (A) or fineness 0.5 denier or less which is considered the same as current application claim 1 of 10-100 microfine fibers of 0.5dtex.

The Nakayama reference teaches 15 or more numbers of microfine fibers (B) while the current application does not specify the number of (B) microfine fibers.

Nakayama teaches that it is known in prior art to employ fiber bundles of elastic polymers and fiber bundles of non-elastic polymers separately made into fiber bundles which meets the claim limitation that bundles (A) do not contain the polymers of bundles (B) and conversely (B) bundles do not contain (A) fibers [0005]. Nakayama is teaching that the microfine fiber bundles comprise both elastic fibers and nonelastic fibers in order to improve upon prior art embodiments where the elastic fibers agglutinate into larger denier fibers and where the non-elastic fibers are not bound by elastic fibers. While Nakayama's claimed invention is teaching producing microfine fiber bundles of blended elastomeric polymer fibers and nonelastomeric polymer fibers as an improvement, this teaching does not exclude the prior art referenced that teaches it would be known to employ fiber bundles of elastomeric and nonelastomeric polymer separately.

Nakayama teaches that an elastic polymer cannot be made into microfibers according to the prior art, so that the texture and appearance like natural leather cannot be gained (col. 2, lines 48-49). Thus Nakayama teaches elastic microfine fibers and nonelastic microfine fibers are integrated into bundles so that the elastic polymer does not agglutinate to each other upon extraction of the sea component. Nakayama

Art Unit: 1794

teaches the ratio of elastic polymer to nonelastic polymer is important to avoid agglutination which results in a dense structure that is hard (col. 5, lines 52-57).

Nakayama teaches the number of strands of elastic fibers and nonelastic fibers as well as the denier less than 1 is important to achieving the desired fabric with surface denseness and smoothness (col. 5, lines 13-50). Nakayama teaches the fabric is entangled and therefore the fibers will be mixed. Nakayama teaches a ratio of elastic and nonelastic microfine fibers and the structural limitation ranges that produce an elastic leather-like fabric and therefore presents a finding that one of ordinary skill in the art would have recognized that employing a ratio of elastic to non-elastic microfine fibers and fiber bundles would have yielded predictable results.

Nakayama does not teach the microfine elastomeric fibers (A) have a JIS A hardness between 90-97. Hardness is a property inherent in the elastomeric polymers as claimed. Elastomeric polymers are known in the art to be comprised of hard and soft segments as evidenced by Yamakawa.

Yamakawa teaches a synthetic leather comprised of a polyurethane elastomer fiber having a Shore hardness A of 92 or more. Yamakawa teaches the synthetic leather has excellent elasticity and also high tear strength (ABST). Yamakawa teaches the hardness of the polyurethane depends on the mixing ratio of the respective components. Yamakawa teaches the fibers are spun and the fiber diameter of the filaments is preferably within the range of 5 to 50 micron. Yamakawa teaches the smaller the fiber diameter the more flexible the resulting nonwoven fabric becomes (col. 4 and 5, lines 64-67 and 1-2).

It would have been obvious to select an elastomeric polymer with a hardness in the claimed range motivated to achieve the desired properties of elasticity and strength and softness and drape.

5. **Claim 2-5 rejected under 35 U.S.C. 103(a) as being unpatentable over Nakayama EP 1067234 A in view of Yamakawa et al (US 6,784,127) and in further view of Kato et al. (US 4,476,186).** The Nakayama reference teaches a fibrous substrate for artificial leather, comprising microfine fiber bundles of elastic fibers (A) and a microfine fiber bundles of nonelastic fibers (B). As to claim 2, 4 and 5, Nakayama differs from the current application and does not teach that the elastic microfine fibers in the bundle (A) laterally stick together while keeping their original fibrous shape, and that the sticking length is $\frac{2}{3}$ or less of the fiber diameter. Nakayama does not teach that the raised single fibers of the microfine fiber in the fiber bundle (A) do not stick to each other.

Kato teaches an entangled non-woven fabric having a fiber structure which comprises an ultrafine fiber bundle of fiber size not greater than about 0.5 denier that are entangled so that a portion (A) of the fiber bundles are entangled with one another and another portion (B) of the ultrafine fiber bundles have the fine fibers branching from the bundles (ABST). Kato teaches that the ultrafine fibers and fine bundles of ultrafine fibers are entangled with one another and in which both portions (A) and (B) are nonuniformly distributed in the direction of fabric thickness (col. 2 lines 40-43). Kato teaches the fiber sheet is treated with high speed fluid jet streams to branch the ultrafine

Art Unit: 1794

fibers to fine bundles of ultrafine fibers and to simultaneously entangle the fibers and their bundles (col. 10, lines 35-39). Kato teaches this structure relates to a grained sheet having on at least one of its surfaces a grain formed by the fiber structure composed of ultrafine fibers to fine bundles of ultrafine fibers and having a distance between the fiber entangling points of not greater than about 200 microns and a resin in the gap portions to the fiber structure (ABST). Kato teaches a non-woven fabric for synthetic leather and teaches a grained surface that improves flexibility, shearing fatigue resistance and scratches and scuff resistance (col. 2, lines 26-30). Kato teaches a suede-like surface having a dense and beautiful fluff and the fluff was seen continuing from the secondary fiber bundles (col. 18, lines 28-30). Kato teaches the surface of the finished sheet had a grain that was composed of the fibrillated fibers and the resin encompassing the fibrillated fibers (col. 18, lines 20-30).

It would have been obvious to one of ordinary skill in the art to produce a leather-like substrate of Nakayama with the structure of Kato motivated to produce a suede-like surface and a grain that is flexible, durable and soft. It further would have been obvious to provide a surface treatment that left a sticking length of $2/3$ or less of the fiber diameter motivated to produce a surface with a soft feel that would duplicate suede leather.

As to Claim 3, Nakayama differs from the claimed invention because it does not teach that a powder is present within the fibrous material of (A). Kato et al references using fine particles or fillers to form the grain and facilitate fibrillation. See US 4476186 col. 1 line 50. Kato's inventions claim Ultrafine Fiber Entangled Sheet non-woven

Art Unit: 1794

fabrics having a fiber structure that comprises a portion (A) of ultrafine fiber bundles entangled with (B) of ultrafine fiber bundles. Kato's inventions both reference various fillers and fine particles that can be added to improve grain and fibrillate fibers.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated a fine particle into the entangled non-woven substrate sheet motivated by the expectation of improved grain and fiber fibrillation.

6. Claim 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Nakayama in view of Yamakawa et al (US 6,784,127) and in further view of Minami, EP 1213377 A1. Nakayama discloses an artificial leather material as set forth in the preceding paragraph. Nakayama differs from the claimed invention because it does not teach that a powder is present within the fibrous material of (A). Minami teaches use of a powder affixed in nonwoven fabric manufactured from islands-in-sea type fibers. Minami claims a powders-affixed nonwoven fabric comprising of powders less than 50 micron, affixed in fiber web of fiber diameter of 4 micron or less with a length of 3 mm or less and cite examples using fibers of 0.5 denier. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated a fine particle into the entangled non-woven substrate motivated by the expectation that this would enhance fibrillation of the fiber material of Nakayama.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

Art Unit: 1794

unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

14. Claims 1, 2, 4-6 rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 and 15 of U.S. Patent No. 6767853.

Although the conflicting claims are not identical, they are not patentably distinct from each other because both claim a fibrous substrate for artificial leather-like fabric comprising microfine fiber bundles (A) and (B).

Response to Arguments

7. Applicant's arguments filed 2/13/2009 have been fully considered but they are not persuasive. Applicant's argues that the 35 USC 112 1st paragraph rejection is improper and that the specification can be relied upon for an implicit disclosure. The scope of claim 1 as written does not have explicit or implicit support in the specification. Wherein the Applicants arguments and descriptions of microfine fiber bundles (A) and

Art Unit: 1794

(B) in the response are clearly understood, the disclosure in the specification does not clearly describe the bundles to support the negative claim limitation.

8. Applicants argue that the reference to Nakayama discloses bundles comprised of A and B and that is not the same as claim 1 recitation that the bundles A can not contain nonelastic fibers and bundles B can not contain elastic fibers. Examiner maintains that the specification as disclosed does not teach that A does not contain B and B does not contain A. Applicant's specification teaches A' fiber-forming fibers and B' fiber-forming fibers and teaches these fibers can be blended. The link between an exclusive bundle of A' and exclusive bundle of B' is not in the disclosure such that one of ordinary skill in the art can make the invention

9. Applicant continues to present the previous arguments that Examiner has argued that microfine fiber bundles (A) are not explicitly disclosed as being produced from microfine fibers A' and microfine fiber bundles (B) are being produced from B' and that A' and B' are not mixed in the same bundle. The specification requires knowledge in the art of the terms of spinning fibers with island and sea components wherein the sea components are extracted to produce microfine fibers that are bundles. The use of the terms bundles (A) and microfibers A' and bundles (B) of microfibers B' requires a careful analysis of what (A) and A' and (B) and B' are comprised of and are considered of broad scope and one of the reasons that the 35 USC 112 1st paragraph rejection is maintained.

However, based on Applicant arguments that the spinning examples implicitly support the scope of the claims negative limitation, Examiner compared the examples

Art Unit: 1794

and embodiments presented on pages 22-30 with respect to the claim 1. The results of the comparison are presented in the tables below. The claim limitations require:

(A) an elastomeric polymer with a JIS A hardness of 90 to 97 formed into bundles with a single fiber fineness of 0.5 dtex or less and 10 to 100 microfine fibers in each bundle.

(B) a nonelastomeric polymer with a single fiber fineness of 0.5 or less.

Spinning Example	Presumed Bundle Type	Polymer Composition	JIS A hardness	dtex	Fiber per bundle
1	(A) - elastomeric	PU – island PE - sea	95	0.08	Not in example
2	(A) - elastomeric	PU – island PE – sea + silicone powder	93	0.08	Not in example
3	(A) - elastomeric	PU - island	85	0.08	Not in example
4	(A) - elastomeric	PU – island PE - sea	97	0.007	Not in example
5	(B) - nonelastomeric	Nylon – island PE - sea	N/A	0.004	Not in example

Art Unit: 1794

Table 1

	Examples		Comparative Examples		
	1	2	1	2	3
Microfine Fiber Bundle					
kind (spinning example)	1/5	2/5	3/5	4/5	5
blending ratio (by mass)	50/50	50/50	50/50	50/50	—
Polymeric elastomer/fiber (by mass)	10/90	10/90	10/90	20/80	30/70
Mass per unit area (g/m ²)	528	550	525	449	450
Thickness (mm)	1.1	1.1	1.1	1.1	1.1
Apparent specific gravity (g/cm ³)	0.45	0.46	0.48	0.41	0.41
Tensile strength at break (kg/25 mm)					
machine direction	23	22	23	17	32
transverse direction	21	21	24	16	35
Elongation at break (%)					
machine direction	220	210	230	170	90
transverse direction	190	200	210	200	120
Tear strength (kg)					
machine direction	11	10	6	10	13
transverse direction	11	11	5	10	11
Appearance	A	A	C	C	A
Touch or Feel	A	A	A	B	B
Stretchability	A	A	A	B	C
Extension elastic recovery (%)	92	92	88	86	76

Art Unit: 1794

Table 2

	<u>Examples</u>		<u>Comparative Example</u>
	3	4	4
Leather-like sheet substrate	Ex. 1	Ex. 2	Com. Ex. 1
Mass per unit area (g/m ²)	228	686	232
Thickness (mm)	0.5	1.2	0.5
Apparent specific gravity (g/m ³)	0.45	0.57	0.46
Tensile strength at break (kg/25 mm)			
machine direction	11	28	10
transverse direction	10	32	10
Elongation at break (%)			
machine direction	210	180	210
transverse direction	190	170	200
Tear strength (kg)			
machine direction	4	7	3
transverse direction	5	7	3
Appearance	A	A	C
Touch or Feel	A	A	B
Drapeability	A	A	B
Stretchability	A	A	A
Extension elastic recovery (%)	90	91	86

Example	Bundle (A)	Bundle (B)	Ratio (A) to (B)	Results
1	Spinning Ex. 1	Spinning Ex. 5	50/50	Good
2	Spinning Ex. 2	Spinning Ex. 5	50/50 from Table 1	Good
Comparative 1	Spinning Ex. 3	Spinning Ex. 5	50/50 from Table 1	Partial Fiber sticking – poor strength
Comparative 2	Spinning Ex. 4	Spinning Ex. 5	50/50 from Table 1	Fiber sticking Poor stretchability

The current Application's examples teach polyurethane elastomeric polymers with polyethylene sea components and show that JIS A hardness of 95, 93, 85 and 97. However only examples produced with the 95 and 93 JIS A hardness are disclosed to have good results. Applicant's claim 1 is broad in scope compared to the disclosure of the examples. Utilizing the spinning examples to show that there is no non-elastomeric polymer spun with the elastomeric polymer would limit claims to a polyurethane elastomer and a nylon non-elastomer. Therefore the 35 USC 112 1st paragraph rejection that the negative limitation does not have explicit or implicit support in the specification is maintained. Further, it appears that the spinning example produced with a polyurethane elastomer with a JIS A hardness of 97 which is employed to produce comparative example 2, does not have the desirable results of finished nonwoven examples 1 and 2. While the desired results are not claimed, it would appear that the Applicant does not have support for selecting polyurethane elastomers of a specific range of JIS A hardness.

As Nayakama teaches that prior art inventions can be produced from bundles of elastomeric and nonelastomeric polymers that are separate and then blended, it is not clear from the specification or the claims what novel feature would distinguish Applicant's invention from the prior art.

10. As Applicant's arguments are not sufficient to overcome the 35 USC 112 1st paragraph rejection over claims 1-6, the previous 35 USC 102/103 rejections over claims 1 and 6 are maintained.

Art Unit: 1794

11. Applicant has not filed a Terminal Disclaimer and the previous Double Patenting rejection is maintained.

12. Wherein Applicant has argued there is implicit disclosure for the negative limitation, Examiner has presented new 35 USC 103 rejection over Nakayama in view of Yamakawa to present that it would be obvious to select an elastomeric polymer with a JIS A hardness that is in a specific range such as the polyurethane fiber disclosed in the spinning examples in Applicants specification.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER STEELE whose telephone number is (571)272-7115. The examiner can normally be reached on Office Hours Mon-Fri 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Tarazano can be reached on (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. S./
Examiner, Art Unit 1794

/Elizabeth M. Cole/
Primary Examiner, Art Unit 1794

3/28/2009